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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-second Meeting
Montreal, 29 May to 2 June 2023
Item 9(d) of the provisional agenda¹

PROJECT PROPOSAL: ARGENTINA

This document consists of the comments and recommendation of the Secretariat on the following project proposal:

Phase-out

- HCFC phase-out management plan (stage II, third tranche) UNIDO and Italy

¹ UNEP/OzL.Pro/ExCom/92/1

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Argentina

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out plan (stage II)	UNIDO (lead), Italy	79 th	50% phase-out by 2022

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2021	164.23 ODP tonnes
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2022	
Chemical	Aerosol	Foam	Fire-fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22	0.04	0.92		5.23	103.91				110.09
HCFC-123			1.27		0.03				1.30
HCFC-141b	2.92	52.89			11.56				67.38
HCFC-141b in imported pre-blended polyols		7.40							7.40
HCFC-142b				0.12					0.12

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	400.70	Starting point for sustained aggregate reductions:	377.51
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved:	198.72	Remaining:	178.79

(V) ENDORSED BUSINESS PLAN		2023	2024	2025	Total
UNIDO	ODS phase-out (ODP tonnes)	45.05	11.23	0.0	56.28
	Funding (US \$)	4,160,214	1,036,963	0	5,197,177

(VI) PROJECT DATA		2017	2018	2019	2020-2021	2022	2023	2024	Total	
Montreal Protocol consumption limits (ODP tonnes)		360.63	360.63	360.63	260.45	260.45	260.45	260.45	n/a	
Maximum allowable consumption (ODP tonnes)		330.58	330.58	330.58	260.45	200.35	200.35	200.35	n/a	
Funding agreed in principle (US \$)	UNIDO	Project costs	1,553,271	0	3,280,793	0	0	3,888,050	969,124	9,691,238
		Support costs	108,729	0	229,656	0	0	272,164	67,839	678,388
	Italy	Project costs	250,000	0	0	0	0	0	0	250,000
		Support costs	32,500	0	0	0	0	0	0	32,500
	World Bank*	Project costs	0	0	0	0	0	0	0	0
		Support costs	0	0	0	0	0	0	0	0
Funds approved by ExCom (US \$)	Project costs	1,803,271	0	3,280,793	0	0		0	5,084,064	
	Support costs	141,229	0	229,656	0	0		0	370,885	
Total funds recommended for approval at this meeting (US \$)	Project costs						3,888,050		3,888,050	
	Support costs						272,164		272,164	

* At the 80th meeting, all stage II activities to be implemented by the World Bank were transferred to UNIDO (decision 80/31).

Secretariat's recommendation:	Individual consideration
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PROJECT DESCRIPTION

1. On behalf of the Government of Argentina, UNIDO as the lead implementing agency has submitted a request for funding for the third tranche of stage II of the HCFC phase-out management plan (HPMP), at the amount of US \$3,888,050, plus agency support costs of US \$272,164 for UNIDO only.² The submission includes a progress report on the implementation of the second tranche, the verification reports on HCFC consumption for 2019 to 2022, and the tranche implementation plan for 2023 to 2024.

Report on HCFC consumption

2. The independent verification report submitted as part of the tranche request indicates an HCFC consumption of 229.12 ODP tonnes of HCFCs in 2022, which is 12 per cent below the Montreal Protocol target and 14 per cent above the allowable maximum established for that year in the Agreement between the Government of Argentina and the Executive Committee. While Article 7 data for 2022 has not been reported yet, the figures presented below have been independently verified, as discussed in the “Verification report” section. The 2018-2022 HCFC consumption is shown in table 1.

Table 1. HCFC consumption in Argentina (2018-2022 Article 7 data)

HCFC	2018	2019	2020	2021	2022*	Baseline
Metric tonnes (mt)						
HCFC-22	1,822.45	2,200.07	1,668.67	1,459.72	2,508.36	4,859.5
HCFC-123	46.28	28.28	34.82	77.01	74.15	74.7
HCFC-141b	766.28	254.31	295.65	740.20	814.91	1,031.1
HCFC-142b	40.18	18.29	17.91	15.09	0.62	268.1
Total (mt)	2,675.19	2,500.95	2,017.05	2,292.02	3,398.04	6,281.3
ODP tonnes						
HCFC-22	100.23	121.00	91.78	80.28	137.96	267.3
HCFC-123	0.93	0.57	0.70	1.54	1.48	1.5
HCFC-141b	84.29	27.97	32.52	81.42	89.64	113.4
HCFC-142b	2.61	1.19	1.16	0.98	0.04	17.5
Total (ODP tonnes)	188.06	150.73	126.16	164.23	229.12	400.7

* Data from the verification report on HCFC consumption

3. The low level of HCFC consumption in recent years was due to an economic slowdown coupled with the outbreak of the COVID-19 pandemic and the associated global supply-chain challenges. The ensuing logistical and transportation issues have caused several HCFC shipments that were due to be imported into Argentina in 2021 to have arrived only in 2022. Therefore, 21 extraordinary import licenses³ for a total of 25.79 ODP tonnes of HCFCs had to be issued for the year 2022, despite not being planned in the original distribution of quotas.

4. The unexpectedly high levels of 2022 HCFC consumption were further due to the need to secure the supply of refrigerant for the cold chain in the country. Thirteen of the 21 extraordinary import licenses were to allow Frío Industrias Argentinas, S.A. (FIASA), the only local producer of HCFCs, to import HCFC-22 in light of uncertainties in raw material supplies for HCFC-22 production, logistical problems with transportation, and the energy crisis, which hindered the enterprise’s production process. Following the issuance of the import licenses, FIASA succeeded in importing raw materials for the production of HCFC-22, and produced more than expected. Consequently, HCFC consumption reached the level of

² As per the letter of 20 March 2023 from the Ministry of Environment and Sustainable Development of Argentina to UNIDO.

³ Thirteen licences for 14.25 ODP tonnes of HCFC-22 were issued to FIASA; seven licences for 0.64 ODP tonnes of HCFC-22 and 10.88 ODP tonnes of HCFC-141b were issued to Chemours Company; and one licence for 0.02 ODP tonnes of HCFC-141b was issued to PBB Polisor.

229.12 ODP tonnes in 2022, exceeding the maximum allowable consumption stated in the Agreement by 28.77 ODP tonnes.

5. Furthermore, while Argentina had committed to reducing HCFC consumption to 200.35 ODP tonnes in 2022 on the basis of completing the conversion of the polyurethane (PU) foam sector by 1 January 2022, major challenges have emerged in the supply of the alternative selected for the project, delaying project implementation and the expected reductions in the use of HCFC-141b.

Country programme implementation report

6. The Government of Argentina reported the sectoral use of HCFCs at 186.29 ODP tonnes under the 2022 country programme implementation report. This figure is lower than the verified national consumption⁴ of 229.12 ODP tonnes due to the cumulation of stock, in part related to the delayed 2021 imports arriving in 2022 and the unexpected larger production of HCFC-22.

Verification report

7. The verification report confirmed that the Government continues to implement the licensing and quota system for HCFC imports and exports and that the HCFC consumption levels reported under Article 7 of the Montreal Protocol for 2019 to 2021 remained well below the maximum allowable consumption levels under the Montreal Protocol and the Agreement between the Government and the Executive Committee. For the year 2022, the verification report indicated that the HCFC consumption of 229.12 ODP tonnes was below the Montreal Protocol target, but above the maximum allowable consumption of 200.35 ODP tonnes stated in the Agreement between the Government and the Executive Committee. Despite this, the verification indicates that the regulatory system is properly structured to manage the Government's commitments under the Montreal Protocol, that the verified data is reliable, and that relevant authorities undertake adequate control and monitoring of all operations related to the production, import and export of HCFCs.

Stage I of the HCFC phase-out management plan: Report on the remaining activity

8. Stage I of the HPMP was extended to 31 July 2021 to allow for the completion of the project to demonstrate the use of flushing equipment using HFO-1233zd as cleaning solvent in the refrigeration sector (decision 86/21). The project was completed, with 1,570 technicians trained in good flushing practices and 12 flushing units⁵ using HFO-1233zd distributed to selected workshops for demonstration. The final report submitted by the Government through UNIDO in April 2022, concluded that the equipment provided excellent reliability and quality of flushing in a large variety of applications, ranging from domestic refrigerators to chillers; that regenerated solvent could be repeatedly reused (between 15 and 20 times); and that solvent loss levels were generally low. However, upfront investment required and local scarcity of HFO-1233zd still pose serious concerns, slowing down the wider adoption of the technology and the complete phase-out of HCFC-141b used in the cleaning of refrigeration circuits.

Stage II of the HCFC phase-out management plan: Progress report on the implementation of the second tranche

Legal framework

9. Argentina has a web-based system for controlling the imports and exports of ozone-depleting substances (ODSs), both pure and contained in blends, including polyols. The licensing system includes the imports of room air-conditioning units, and HFCs are now also covered by the national licensing system.

⁴ Defined as production plus imports minus exports.

⁵ Ekotez flushing units, including seven Ekoflush K560 models for smaller systems and five Ekoflush K570 models for larger systems.

10. Argentina's national ozone unit, Oficina Programa Ozono (OPROZ), continues to carry out activities related to the implementation of the licensing system. OPROZ has also participated in meetings on international trade with customs and foreign trade authorities, joined Global Operation Demeter VII⁶ held by the World Customs Organization, investigated alleged refrigerant smuggling into the country and reported on it to the Ozone Secretariat,⁷ and cooperated in the analysis of potential cases of illegal trade of ODSs.

11. Under stage II of the HPMP, the Government of Argentina committed to banning the imports and use of HCFC-141b for flushing refrigeration circuits during servicing by 1 January 2022, banning the imports and use of HCFC-141b pure or contained in pre-blended polyols for the manufacture of PU foam by 1 January 2022; and banning the imports and use of HCFC-22 and HCFC-142b for the manufacture of extruded polystyrene (XPS) foam by 1 January 2022. In consultation with the private sector, the Government has decided to postpone the enforcement of these bans to allow for the completion of ongoing projects in the PU and XPS foam sectors and to allow more time to finding an economically viable alternative for flushing refrigeration circuits.

Manufacturing sector

12. The status of conversion of projects in the PU and XPS foam sectors is summarized in table 2.

Table 2. Status of progress of conversion projects in the PU and XPS foam sectors

Project/ enterprise	HCFC consumption		Funds approved (US \$)	Status
	mt	ODP tonnes		
PU foam sector individual projects				
Friostar	38.92	4.28	336,050	Equipment procured and delivered to the two enterprises. Installation and commissioning are to take place during the second half of 2023. Project completion is expected in the last quarter of 2023.
Argenpur	21.61	2.38	211,524	
Subtotal for PU foam individual projects	60.53	6.66	547,574	
PU foam sector systems houses (SHs) and downstream users (DSUs)				
Alkanos (16)	96.02	10.56	999,647	One enterprise (Briket) individually completed its conversion to cyclopentane. The group project was delayed due to COVID-19. The viability of all SHs was reassessed considering the pandemic's impact on the industry and reconfirmed. Contract modalities were revised in line with the new UNIDO procurement guidelines. Two contracts were signed (with Alkanos and Quimica del Caucho) and another two are about to be signed (with BASF and P. San Luis). Huntsman left the sector; Ecopur may also leave. SHs are already testing HFOs with the limited quantities available. DSU conversions are planned in 2023 and 2024.
BASF (20)*	107.98	11.88	914,955	
Dow (8)*	45.35	4.99	446,140	
Ecopur (38)	46.59	5.13	510,763	
Huntsman (28)*	92.55	10.18	962,540	
Poliresinas San Luis (12)	22.03	2.42	241,438	
Quimica del Caucho (17)	56.50	6.21	588,344	
Subtotal for PU foam SHs and DSUs	467.02	51.37	4,663,827	
Total for the PU foam sector	527.55	58.03	5,211,401	
XPS foam sector				
Celpack	57.30	3.42	348,767	Celpack's financial viability is being assessed to determine if it will participate in the project.
Perfiles Revestidos				Equipment operating with carbon dioxide was installed; tests and trials are ongoing. Project completion is expected for the first quarter of 2024.
Total for the XPS foam sector	57.30	3.42	348,767	

* These SHs are ineligible due to non-Article 5 ownership; funding is provided only for DSUs.

⁶ Conducted from 1 to 31 October 2021, Demeter VII tackled the illicit trafficking of waste, ODSs and HFCs.

⁷ OPROZ was awarded a "Global Montreal Protocol Award for Customs and Enforcement Officers" by the Environmental Investigation Agency.

Refrigeration servicing sector

13. Since the approval of the second tranche, the following activities have been implemented:

- (a) *Technician training on good practices in handling flammable refrigerants:* Twenty training tool kits and sets of equipment (i.e., mini bench training units, recovery units, portable hydrocarbon (HC) charging units, manifolds, brazing kits, and additional tools) were delivered to 18 certified trainers⁸ across the country. A guide on good servicing practices was developed. The training programme was launched in March 2020 but was delayed due to the COVID-19 restrictions. So far, 400 technicians have received training;
- (b) *Technician certification in handling HC refrigerants:* The contract was signed with the Universidad Tecnológica Nacional (UTN) to serve as the certification body. OPROZ and the UTN developed the questions, protocol, and approval criteria for the certification exams, but the programme was delayed due to the COVID-19 restrictions. So far, 197 technicians have been certified in the safe handling of flammable refrigerants. UNIDO initiated the procurement of tool kits for working with flammable refrigerants⁹ to be provided to the first 1,000 certified technicians as an incentive to participate in the certification scheme;
- (c) *Technical assistance to reduce refrigerant leaks in 29 supermarkets:* The project was completed. Each supermarket developed a plan of action to reduce refrigerant leaks and energy consumption, installed a leak monitoring system,¹⁰ monitored outcomes for 12 months, and received quarterly visits to verify results, including environmental impact¹¹ and costs incurred. Beneficiaries reported a 19 per cent reduction in greenhouse gas emissions and recorded detailed data on the areas of their refrigeration and air-conditioning (RAC) installations with the highest incidence of leaks. A detailed final report included lessons learned, costs incurred, financial savings, reductions in refrigerant use, and energy savings compared to the baseline. A workshop will be held to share the project results with other supermarkets, commercial refrigeration servicing enterprises and independent technicians; and
- (d) *Upgrade of the reclaiming centre:* OPROZ and UNIDO developed technical specifications and completed the procurement process for one reclaiming centre operating with 15-year-old equipment. New equipment¹² was commissioned in March 2023.

Project implementation and monitoring

14. The project implementation and monitoring unit (PMU) in Argentina has two components: one for the servicing sector and one for the foam sector. Out of the US \$332,000 approved so far for the PMU, US \$200,408 have been disbursed, including US \$27,889 for national consultants in the servicing sector, US \$36,470 for local travel and monitoring related to the servicing sector, US \$118,592 for national

⁸ During the previous tranche, these trainers were certified in Italy using the “REAL Alternatives 4 life” learning programme for the safe handling of flammable refrigerants.

⁹ Including piercing pliers, vacuum gauge, portable digital multimeter, portable electronic leak detector for HC, portable charging stations for HC, safety goggles and insulated safety gloves.

¹⁰ “PlantWatchPRO3” system, an eMeter energy meter, and CAREL refrigerant detectors to enable the monitoring of leaks of HFC and HCFC gases and the measurement of energy consumption.

¹¹ Measured through an analysis of the Total Equivalent Warming Impact.

¹² The procured equipment includes: high capacity reclaim unit, refrigerant recovery unit, industrial floor scale, pallet truck with scale, refrigerant charging scale, refrigerant identifier kit, Goetz tube set, vapour transfer assist device, high-accuracy thermometer, high-accuracy pressure gauge, refilling station with liquid pump, vacuum pump, heat gun for anti-tamper sleeves and consumables, and spare parts.

consultants in the foam sector, and US \$17,457 for travel related to the foam sector. Remaining funding will be disbursed in 2023.

15. In addition, the monitoring of HCFC-22 production at FIASA for 2020 to 2022 has been completed. Due to the COVID-19 pandemic, the monitoring of HCFC-22 to control production volume at FIASA was performed virtually, followed by a monitoring visit in 2022.

Level of fund disbursement

16. As of May 2023, of the US \$5,084,064 approved so far, US \$2,206,747 had been disbursed (US \$1,996,831 for UNIDO and US \$209,916 for the Government of Italy), as shown in table 3. The balance of US \$2,877,317 will be disbursed in 2023-2024.

Table 3. Financial report of stage II of the HPMP for Argentina (US \$)

Agency	First tranche		Second tranche		Total		
	Approved	Disbursed	Approved	Disbursed	Approved	Disbursed	Balance
UNIDO	1,553,271	1,153,152	3,280,793	843,679	4,834,064	1,996,831	2,837,233
Italy	250,000	209,916	0	0	250,000	209,916	40,084
Total	1,803,271	1,363,068	3,280,793	843,679	5,084,064	2,206,747	2,877,317
Disbursement rate (%)	76		26		43		

Implementation plan for the third tranche of stage II of the HCFC phase-out management plan

17. The following activities will be implemented by UNIDO between June 2023 and December 2024:

- (a) *Individual PU and XPS foam manufacturing enterprises:* Completion of conversions at Argenpur, Friostar and Perfiles Revestidos, and conversion of Celpack once its financial viability has been confirmed (funds from previous tranches);
- (b) *Systems house umbrella project in the PU foam manufacturing sector:* Signature of three remaining contracts; procurement of thermal conductivity testers for national systems houses; tests and trials for downstream users to begin using HFOs; payment of incremental operating costs to downstream users upon approval of tests and trials (US \$2,139,550);
- (c) *Refrigeration servicing sector:* Training of 1,500 technicians in good practices in the handling of flammable refrigerants; certification of 1,000 technicians through the UTN; distribution of the 1,000 procured tool kits to certified technicians; continued operation of the reclaiming centre; and delivery of regular awareness activities (US \$1,484,000); and
- (d) *Project implementation and monitoring:* Annual updates of the HCFC quota system; monitoring of HCFC-22 production at FIASA (US \$17,500); monitoring of the ongoing conversions at the PU and XPS foam enterprises (US \$147,000, including US \$110,000 for staff and consultants, US \$25,000 for travel, and US \$12,000 for monitoring); and continued monitoring of activities in the refrigeration servicing sector (US \$100,000, including US \$30,000 for staff and consultants, US \$35,000 for travel, US \$28,000 for workshops, US \$2,000 for office equipment and US \$5,000 for monitoring).

Request for the extension of stage II of the HCFC phase-out management plan

18. Due to delays caused by the COVID-19 pandemic in the implementation of activities in the systems house umbrella project and in the refrigeration servicing sector’s training and certification activities, the

Government of Argentina is requesting an extension of stage II of the HPMP, from the date of 31 December 2023 established in the Agreement, to 31 December 2024.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

HCFC consumption exceeding the maximum allowable consumption target in 2022

Issue

19. The verified national consumption of HCFCs in 2022 was 229.12 ODP tonnes. While this level of consumption remains in compliance with the Montreal Protocol target of 260.45 ODP tonnes, it is 28.77 ODP tonnes above the maximum allowable consumption of 200.35 ODP tonnes for 2022, as stated in the Agreement between the Government of Argentina and the Executive Committee.

20. Following detailed discussions with UNIDO on the circumstances that caused national HCFC consumption to exceed the target stated in the Agreement for 2022, the Secretariat notes the following:

- (a) In 2021, FIASA had a very low production of HCFC-22 due to disruptions in the global supply chain and the inability to obtain the necessary feedstock. Considering the potential risk to the entire national cold chain, heavily reliant on the country's sole producer of HCFC-22, the Government of Argentina issued an import license to FIASA in 2021 for 16.5 ODP tonnes of HCFC-22;
- (b) Due to the extended delays in the global supply chain, several shipments purchased in 2021 with licenses issued for 2021 only entered the country in 2022, including the FIASA imports (14.25 ODP tonnes of HCFC-22), as well as others (0.64 ODP tonnes of HCFC-22 and 10.90 ODP tonnes of HCFC-141b). Because the 2021 import licenses had expired by the time the shipments arrived, the Government of Argentina was forced to issue extraordinary import licenses to FIASA and others for 2022. The delayed shipments from 2021 were taken into account when the regular import quotas for the year 2022 were granted;¹³ and
- (c) During 2022, FIASA reported that its production volumes were still low and requested additional import licenses at 19.25 ODP tonnes, indicating that they would not reach their maximum import quota. However, following the issuance of the import licenses,¹⁴ FIASA succeeded in importing raw materials for the production of HCFC-22 and produced more than expected, leading to excess HCFC consumption in 2022.

21. The Secretariat noted that the Government's commitment to reduce the country's HCFC consumption from 260.45 to 200.35 ODP tonnes in 2022 had been based on the expected completion of all projects in the foam sector and the phase-out of HCFC-141b consumption by 1 January 2022, and that eliminating the consumption of HCFC-141b as planned would have allowed the country to remain in compliance with the Agreement, regardless of the HCFC-22 supply issues. However, UNIDO explained that, despite the industry's willingness to convert, the impact of the COVID-19 pandemic combined with difficulties in accessing the low global-warming potential (GWP) alternative selected for the conversion of smaller enterprises meant that the projects could not meet the planned completion date, preventing the Government of Argentina from imposing the ban HCFC-141b on 1 January 2022. Further description of the status of the PU foam sector is included in paragraphs 29 to 33.

¹³ Resolutions 2/22 and 49/22.

¹⁴ Resolution 408/22.

Plan of action proposed by the Government of Argentina to avoid similar issues in the future

22. On the adjustments made to the HCFC production/import/export licensing and quota system to avoid similar situations in the future, UNIDO explained that what happened in 2022 was unprecedented and primarily caused by external factors that forced the Government of Argentina to take action to secure the supply of refrigerants needed to maintain the national cold chain. While noting this, the Government of Argentina has immediately taken the following steps to prevent a similar situation from occurring in the future:

- (a) *Surveys on delayed shipments of controlled substances:* OPROZ will conduct biannual surveys of importing enterprises to determine if any of the shipments that had been licenced in 2022 did not enter the country and could do so in 2023, thus altering the initial import forecasts. The first survey conducted indicates that several shipments for which licenses at a total of 10.67 ODP tonnes were issued in 2022, did not enter the country in the same year;
- (b) *Control of extraordinary import quotas:* OPROZ will exercise strict, continuous control on the delivery of extraordinary quotas to new and existing importers in light of the original import estimates provided by the resolutions of the Ministry of the Environment and Sustainable Development for the year 2023. No extraordinary quotas will be issued for any amount exceeding the allowable consumption;
- (c) *Monitoring and recording of shipments:* In cooperation with the Customs Authority, OPROZ will monitor and record HCFC shipments entering the country on a monthly basis, undertaking verifications of actually used licenses and the estimated imports for the remaining months of the year. Importers have been advised by the Government that HCFC imports exceeding their assigned 2023 quotas will not be allowed;
- (d) *Continuous monitoring and recording of production volumes at FIASA:* On a monthly basis, OPROZ and the Ministry of Industry will monitor production at FIASA to better estimate possible shortages of raw materials that could require an increase in imports to supply the national cold chain. A verification mission is scheduled for 11 May 2023; and
- (e) *Monitoring of HCFC exports:* On a monthly basis, OPROZ will systematically monitor HCFC exports to determine their impact on the final account of consumption in the country.

23. UNIDO further reported that the independent auditor had verified the adoption of these measures, considering them to be adequate to prevent possible deviations in 2023 and future years.

Implications of the Agreement between the Government and the Executive Committee

24. In accordance with paragraph 11 of the Agreement between the Government and the Executive Committee,¹⁵ in the event of non-compliance with the targets stated in row 1.2 of Appendix 2-A, the Executive Committee may *inter alia* reduce the funding by the amount set out in Appendix 7-A

¹⁵ “Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A (“Reductions in Funding for Failure to Comply”) in respect of each ODP kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement, and take related decisions.”

(“Reductions in Funding for Failure to Comply”) in respect of each ODP kg of reductions in consumption not achieved in any one year. The Agreement further stipulates that the Executive Committee will discuss each specific case in which the country did not comply with the Agreement and take related decisions.

25. In accordance with Appendix 7-A of the Agreement with the Government of Argentina, the funding agreed for the HPMP could be reduced by US \$172.61 per ODP kg¹⁶ of consumption in excess of the phase-out target for any year covered by the Agreement, on the understanding that this reduction would not exceed the funding level of the tranche being requested. With 28.77 ODP tonnes of excess consumption, the deduction is calculated at US \$4,965,990. The total amount of funds being requested for the tranche is US \$3,888,950, making this the maximum value to be deducted.

In considering the circumstances that led to non-compliance with the consumption target in the Agreement, the Secretariat notes that, had the delayed shipments entered the country in 2021 as planned, HCFC consumption reported under Article 7 for that year would have remained 70.52 ODP tonnes below the agreed consumption limit, but would have still exceeded the 2022 limit by 2.98 ODP tonnes, ultimately resulting in non-compliance with the Agreement.¹⁷ The delayed 2021 shipments contained a total of 25.79 ODP tonnes of HCFCs, representing 90 per cent of the overall excess import tonnage.

26. The Executive Committee discusses each specific case of non-compliance with the Agreement on a case-by-case basis. In the case of Argentina, the Committee may wish to take into consideration:

- (a) The above analysis and the specific circumstances that prevailed in the country;
- (b) The fact that the Government of Argentina has been in compliance with the Agreement during all previous years; and
- (c) That the Government has taken corrective measures and started implementing a plan of action to improve the application and monitoring of the licensing and quota system, including a closer monitoring of production levels and limited issuance of extraordinary import licenses in light of needs.

Progress report on the implementation of the second tranche of stage II of the HPMP

Legal framework

27. The Government of Argentina has issued HCFC import quotas for 2023 through Resolution 526/2022 at a level below the maximum allowable consumption specified in the Agreement with the Executive Committee. For production, there is a maximum allowable production limit, set by the control measures, imposed upon FIASA.

28. Import quotas are controlled through the continuous monitoring of shipments entering the country and are registered in real time in the customs database, to which OPROZ has access. Additionally, the quantity of ODP tonnes expected to be produced annually that is reported by FIASA to the Ministry is subsequently verified by the Secretariat of Industry and Productive Development on a monthly basis. There is also a biannual documentary review. OPROZ also monitors the evolution of imports, exports and production to ensure compliance with the Agreement. In 2022, the volatility of the global supply chains made it impossible to accurately estimate the level of production of HCFC-22. The proposed plan of action in paragraph 22 intends to address such contingencies.

¹⁶ Two times the cost effectiveness of the stage in ODP tonnes. Cost effectiveness of the stage is US \$86.30/ODP kg calculated by the cost of stage II of US \$9,941,238 divided by the 115.19 ODP tonnes reduced under stage II.

¹⁷ By accounting 25.79 ODP tonnes in delayed shipments in 2021 rather than 2022, HCFC consumption would have been 189.93 ODP tonnes in 2021 and 203.33 ODP tonnes in 2022.

Polyurethane foam manufacturing sector

29. The Secretariat noted that the two individual conversions in the PU foam sector (Friostar and Argenpur) were delayed due to the COVID-19 pandemic but will be completed in 2023. Regarding the umbrella project to convert small and medium-sized enterprises (SMEs) through systems houses, UNIDO explained that the delays to start were due to the COVID-19 pandemic and the difficulties to access HFOs.

30. On the availability and price of HFOs, UNIDO reported that, despite indications from chemical suppliers in 2021 that the price of HFO was going to drop from approximately US \$20/kg to US \$16/kg, their current price is approximately US \$40/kg in the local market and the supply continues to be very limited. The delivery time for material, even for testing amounts, was over 120 days. These circumstances make it difficult to convince downstream users to choose the alternative instead of HCFC-141b. Despite of this, two systems houses have already signed contracts for implementation (Alkanos and Quimica del Caucho) and another two (Poliresinas and BASF) are about to sign. The systems houses have begun working on developing HFO-based formulations on their own, which should expedite the delivery of HFO-based systems to downstream users. Trials and testing are expected to take place within three months of contract issuance, and the conversion of all downstream users is expected to be completed by December 2024, on the understanding that the selected technology is available.

31. Upon discussions on the availability of technology, UNIDO informed that the systems houses would explore the possibility to test formulations based on other low-GWP alternatives to be adopted in the event that the price and availability of HFOs did not improve, and declared that it would report on the status of technology adoption at the time of submitting the next tranche. The Secretariat notes that any change of technology is to be undertaken in light of the flexibility clause contained in paragraph 7 of the Agreement.

32. Regarding the two systems houses not participating in the project (Huntsman and Ecopur), the Secretariat notes that the approved incremental costs have not included any items for these enterprises, that no return of associated funds was required, and that their downstream users are still eligible for assistance in phasing out their use of HCFC-141b. UNIDO explained that the 28 enterprises associated with Huntsman and the 38 enterprises associated with Ecopur would be assisted through another systems house.

33. In view of the large number of downstream PU foam users included in the project (139) and the need to verify their eligibility in line with decision 84/64(d), UNIDO will submit as part of the fourth tranche request the updated list of eligible downstream users that are still using HCFC-141b and will be receiving assistance from the Multilateral Fund. Any enterprise found ineligible will be removed from the project and the associated funds will be returned to the Fund. Noting that the blend of HFC-365mfc/HFC-227ea is being used in the foam sector in Argentina, UNIDO further confirmed that the 139 enterprises included in this project would commit to not converting to HFCs.

*Extruded polystyrene foam manufacturing sector**Celpack*

34. The conversion from HCFC-22 to carbon dioxide at the XPS foam enterprise Celpack had been delayed by the enterprise's economic difficulties. In line with decision 84/64(d)(ii), UNIDO has since submitted progress reports to each meeting,¹⁸ indicating that the majority of Celpack's debt was with the Federal Agency for Public Revenue, and that the Parliament of Argentina, recognizing the economic impact of COVID-19, approved a moratorium on financing debts due by 31 July 2020. Since then, Celpack has been paying off its debt in accordance with the schedule approved by the Tax Authority. An agreement has

¹⁸ The Executive Committee has noted the progress reports submitted to all Executive Committee meetings that took place in 2020 and 2021, as reflected in decisions 85/4, 86/22, 87/7 and 88/17.

been reached with the enterprise's creditors to deduct 40 per cent of debt to be paid over the next five years and the court has approved the release of Celpack's assets, which had previously been seized.

35. In the meantime, the enterprise has decided to convert to butane at a cost of US \$310,770. On the understanding that the enterprise was not eligible to receive funding from the Multilateral Fund until their financial situation had stabilized, Celpack decided to start the initial investment with its own funds and to obtain all necessary approvals from the Secretary of Energy, including those related to the use of flammable substances. UNIDO confirmed that no funding would be disbursed to Celpack until the issue was resolved and its resolution considered by the Executive Committee. As indicated in previous reports, in the event that the enterprise were found to not be financially viable, the level of funds to be returned to the Multilateral Fund would be calculated taking into account the terms of flexibility used for the approval of funds for the XPS foam sector in Argentina.¹⁹ However, considering the reported developments, UNIDO and the Government expressed confidence that the enterprise would still participate in stage II of the HPMP and complete its conversion in due time. The Secretariat suggests that progress be reported, as part of the submission of the request for the next tranche, in line with decision 91/17.

Refrigeration servicing sector

36. Following delays in the training and certification of technicians due to COVID-19 restrictions, UNIDO reported that these activities were now restarting, and that 1,500 technicians would be trained with funds from the current tranche. The technician certification programme has launched with a lower participation rate than was anticipated in 2021, but 1,000 technicians are still expected to be certified under this tranche. Regional branches of the UTN now have the capacity to certify technicians across the country, and the extension of stage II should allow for the completion of all remaining training and certification activities by the extended date of December 2024.

Request for the extension of stage II of the HCFC phase-out management plan

37. The Secretariat noted that, despite the limitations caused over two years by the COVID-19 pandemic, the Government of Argentina and UNIDO succeeded in achieving additional progress in the implementation of stage II of the HPMP. The systems house project and technician training activities, which had experienced major delays, have restarted. The Secretariat considers that the extension of stage II of the HPMP for one year, i.e., to 31 December 2024, will allow the Government of Argentina to request the last tranche, originally planned for 2022, at the first meeting of 2024, and to complete all outstanding activities. In view of the issues reported on the availability of the selected technology for the conversion of the PU foam sector, the Secretariat suggests to re-examine the situation at the time of the submission of the next tranche in the first meeting in 2024.

Revision of the Agreement

38. In view of the extension of stage II, which includes reallocation of the third tranche from 2021 to 2023 and of the fourth tranche from 2022 to 2024, Appendix 2-A of the Agreement between the Government of Argentina and the Executive Committee has been updated and paragraph 17 has been modified to indicate that the updated revised Agreement supersedes that reached at the 80th meeting, as contained in Annex I to the present document. The full updated Agreement will be appended to the final report of the 92nd meeting.

¹⁹ The funding of US \$348,767 approved for the two enterprises in the XPS foam sector was lower than the estimated incremental costs of US \$439,200; it was agreed that the Government of Argentina would have flexibility in the allocation of funds between the two enterprises, on the understanding that both enterprises would convert to the selected technology on time (paragraph 76 of document UNEP/OzL.Pro/ExCom/79/27).

Gender policy implementation²⁰

39. As part of gender mainstreaming in the HPMP for Argentina, UNIDO indicated that a dedicated training course in refrigeration servicing would be offered to female RAC technicians. This training course is expected to encourage women's participation in the course on the Safe Handling of Flammable Substances. At present, the Government of Argentina has certified three female RAC technicians in the Safe Handling of Flammable Substances (out of 400 certified technicians) and plans to invite them to the refrigerator servicing course to share their experiences and motivate other female technicians to participate in the certification process.

Sustainability of HCFC phase-out

40. To ensure the sustainability of the activities included in stage II of the HPMP, the Government of Argentina had planned to issue, by 1 January 2022: a ban on the import and use of HCFC-141b pure or contained in pre-blended polyols for the manufacture of PU foam; a ban on the import and use of HCFC-22 and HCFC-142b for the manufacture of XPS foam; and a ban on the import and use of HCFC-141b for flushing refrigeration circuits during servicing. In light of the delays in the implementation of stage II, the date of these bans had to be postponed.

41. The Government is working with foam enterprises on the basis of letters of commitment to no longer purchase HCFC-142b or HCFC-141b. The dates for the bans will depend on the availability of alternatives, which will allow the completion of the conversion projects. Specifically in the case of the use of HCFC-141b to flush refrigeration systems during servicing, the project implemented to identify and test alternatives concluded that although the tested technology was technically satisfactory, its high price and the lack of available solvent made it a non-feasible solution for replacing HCFC-141b in flushing refrigeration circuits for the time being. The Secretariat suggests that the updated dates for these bans be reported in the submission for the next tranche request.

42. In the servicing sector, contracting the UTN to serve as the national body to certify technicians in the safe management of flammable refrigerants will ensure that this service will continue being provided by a local institution on a regular basis.

43. The primary risk for the timely and successful implementation of the activities under stage II continues to be the restricted availability of alternative substances, specifically HFO. The Secretariat notes that similar challenges are faced by other countries in the region. UNIDO informed that this concern has been raised by the Government of Argentina in the recent meetings of the Executive Committee. As a measure to reduce this risk, UNIDO informed that the systems houses would explore the possibility to test formulations based on other low GWP alternatives to be adopted in the event that the price and availability of HFOs did not improve.

Conclusion

44. Conversions to low-GWP alternatives in the PU and XPS foam sectors in Argentina continue, with some delays owing to the COVID-19 pandemic. One XPS foam enterprise is still facing economic difficulties and will continue to be monitored to determine whether it will participate in the HPMP. The implementation of activities in the refrigeration servicing sector has advanced as well. The project that has experienced the longest delays due to COVID-19 and the scarce availability and high prices of the selected alternative, i.e., the umbrella project to convert PU foam SMEs through seven systems houses, has restarted. UNIDO disbursed 43 per cent of the funds approved so far. An extension of stage II to 31 December 2024

²⁰ In line with decision 84/92(d), decision 90/48(c) encouraged bilateral and implementing agencies to continue ensuring that the operational gender mainstreaming policy was applied to all projects, taking into consideration the specific activities presented in table 2 of document UNEP/OzL.Pro/ExCom/90/37.

would allow the Government of Argentina to complete the activities planned under the third and fourth tranches of stage II; however, this is subject to availability of the alternative technology in the PU foam sector, and a review of the situation will be required at the time of the submission of the next tranche request. The independent verification reported that the Government of Argentina was in compliance with its HCFC consumption targets in the Agreement for the years 2019-2021, but exceeded the 2022 target. The Executive Committee may wish to consider this issue in light of the information provided by the Secretariat in the present document.

RECOMMENDATION

45. The Executive Committee may wish to consider:

(a) Noting:

- (i) The progress report on the implementation of the second tranche of stage II of the HCFC phase-out management plan (HPMP) for Argentina;
- (ii) With concern that the HCFC consumption in 2022 exceeded the maximum allowable consumption set out in the Agreement between the Government of Argentina and the Executive Committee for that year by 28.77 ODP tonnes;
- (iii) That the Government of Argentina is undertaking the necessary steps to return to compliance with the Agreement;
- (iv) That the Fund Secretariat has updated the Agreement between the Government of Argentina and the Executive Committee, as contained in Annex I to the present document, specifically Appendix 2-A, to reflect the reallocation of the third tranche from 2021 to 2023 and the fourth tranche from 2022 to 2024, and paragraph 17, to indicate that the revised updated Agreement supersedes that reached at the 80th meeting;

(b) Requesting UNIDO:

- (i) To submit, with the fourth tranche request:
 - a. The updated list of downstream polyurethane (PU) foam enterprises being assisted by the Multilateral Fund under stage II, including their HCFC-141b consumption phased out, subsector, baseline equipment, and technology adopted;
 - b. An update on the financial viability of the extruded polystyrene (XPS) foam enterprise Celpack and a decision on whether the enterprise would be assisted by the Multilateral Fund under stage II of the HPMP for Argentina in line with decision 84/64(d)(ii), noting that, in the event that the enterprise would not be assisted by the Multilateral Fund, the funds associated with its conversion would be calculated taking into consideration the flexibility in the allocation of funds approved for the Government of Argentina in the XPS foam sector, and would be deducted from the approval of the next tranche of stage II of the HPMP for Argentina;
 - c. Revised dates to the commitment from the Government of Argentina to issue a ban on the import and use of HCFC-141b pure or contained in

pre-blended polyols for the manufacture of PU foam; a ban on the import and use of HCFC-22 and HCFC-142b for the manufacture of XPS foam; and a ban on the import and use of HCFC-141b for flushing refrigeration circuits during servicing;

(c) Approving:

- (i) On an exceptional basis, the extension of the duration of stage II of the HPMP for Argentina to 31 December 2024, given the implementation delays caused by the COVID-19 pandemic, and to review the situation at the time of submission of the next tranche in light of the availability of the selected technology for the PU foam sector; and
- (ii) The third tranche of stage II of the HPMP for Argentina, and the corresponding 2023-2024 tranche implementation plan at a total level of funding to be determined once the issue of the country's performance in line with the Agreement is addressed in light of the information provided in document UNEP/OzL.Pro/ExCom/92/21.

Annex I

**TEXT TO BE INCLUDED IN THE REVISED UPDATED AGREEMENT
BETWEEN THE GOVERNMENT OF ARGENTINA AND THE EXECUTIVE COMMITTEE
OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION
OF HYDROCHLOROFLUOROCARBONS IN ACCORDANCE WITH STAGE II
OF THE HCFC PHASE-OUT MANAGEMENT PLAN**

1. This Agreement represents the understanding of the Government of Argentina (the “Country”) and the Executive Committee with respect to the reduction of controlled use of the ozone-depleting substances (ODS) set out in Appendix 1-A (“The Substances”) to a sustained level of 200.35 ODP tonnes by **1 January 2024** in compliance with Montreal Protocol schedule.

17. At the 80th meeting the World Bank stopped being the Cooperating Agency in respect of the Country’s activities under this Agreement. Therefore, the responsibilities of the World Bank under this Agreement only extend up to the 80th meeting. This **revised** updated Agreement supersedes the Agreement reached between the Government of Argentina and the Executive Committee at the **80th** meeting of the Executive Committee.

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2017	2018	2019	2020 2021	2022	2023	2024	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	360.63	360.63	360.63	260.45	260.45	260.45	260.45	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	330.58	330.58	330.58	260.45	200.35	200.35	200.35	n/a
2.1	Lead IA (UNIDO) agreed funding (US \$)	1,553,271	0	3,280,793	0	0	3,888,050	969,124	9,691,238
2.2	Support costs for Lead IA (US \$)	108,729	0	229,656	0	0	272,164	67,839	678,387
2.3	Cooperating IA (World Bank) agreed funding (US \$)	0	0	0	0	0	0	0	0
2.4	Support costs for Cooperating IA (US \$)	0	0	0	0	0	0	0	0
2.5	Cooperating IA (Italy) agreed funding (US \$)	250,000	0	0	0	0	0	0	250,000
2.6	Support costs for Cooperating IA (US \$)	32,500	0	0	0	0	0	0	32,500
3.1	Total agreed funding (US \$)	1,803,271	0	3,280,793	0	0	3,888,050	969,124	9,941,238
3.2	Total support costs (US \$)	141,229	0	229,656	0	0	272,164	67,839	710,887
3.3	Total agreed costs (US \$)	1,944,500	0	3,510,449	0	0	4,160,214	1,036,963	10,652,125
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)								42.84
4.1.2	Phase-out of HCFC-22 to be achieved in the previous stage (ODP tonnes)								59.57
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)								163.79
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)								70.61
4.2.2	Phase-out of HCFC-141b to be achieved in the previous stage (ODP tonnes)								23.96
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)								0.0
4.3.1	Total phase-out of HCFC-142b agreed to be achieved under this Agreement (ODP tonnes)								1.74

Row	Particulars	2017	2018	2019	2020 2021	2022	2023	2024	Total
4.3.2	Phase-out of HCFC-142b to be achieved in the previous stage (ODP tonnes)								0.0
4.3.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)								12.6
4.4.1	Total phase-out of HCFC-123 agreed to be achieved under this Agreement (ODP tonnes)								0.0
4.4.2	Phase-out of HCFC-123 to be achieved in the previous stage (ODP tonnes)								0.0
4.4.3	Remaining eligible consumption for HCFC-123 (ODP tonnes)								1.57
4.5.1	Total phase-out of HCFC-124 agreed to be achieved under this Agreement (ODP tonnes)								0.0
4.5.2	Phase-out of HCFC-124 to be achieved in the previous stage (ODP tonnes)								0.0

* Date of completion of stage I as per stage I Agreement: **31 June 2021**.